NORTH AMERICAN JOURNAL OF AQUACULTURE

VOLUME 64, NUMBER 1, JANUARY 2002

1 Inability to Control Ceratomyxosis in Rainbow Trout and Steelhead with Oral Treatments of Glucan Immunostimulant or the Fumagillin Analog TNP-470
M. J. Whipple, A. L. Gannam, and J. L. Bartholomew

10 The Effect of Rearing Density on Growth, Survival, and Feed Conversion of Juvenile Atlantic Sturgeon
W. A. Jodun, M. J. Millard, and J. Mohler

16 Short-Term Effect of Diuron on Catfish Pond Ecology
P. V. Zimba, C. S. Tucker, C. C. Mischke, and C. C. Grimm

24 Effects of Four Density Levels on Tule Fall Chinook Salmon during Hatchery Rearing and after Release
J. L. Banks and E. M. LaMotte

34 Inherent Growth Capacity and Social Costs of Bluegill and Hybrids of Bluegill and Green Sunfish: Which Fish Really Grows Faster?
R. S. Hayward and H. P. Wang

47 Effects of Dietary Lipid Levels and Energy:Protein Ratios on Growth and Feed Utilization of Juvenile Nassau Grouper Fed Isonitrogenous Diets at Two Temperatures
E. G. Johnson, W. O. Watanabe, and S. C. Ellis

Communications

55 Experimental Infection of an Exotic Heterophyid Trematode, *Centrocestus formosanus*, in Four Aquaculture Fishes
A. J. Mitchell, A. E. Goodwin, M. J. Salmon, and T. M. Brandt

60 Sensitivity of Juvenile Atlantic Sturgeon to Three Therapeutic Chemicals Used in Aquaculture
K. King and P. Farrell

66 Hormonal Sex Reversal and Evidence of Female Homogamety in Black Crappie
B. Gomelsky, S. D. Mims, R. J. Onders, and W. B. Bean

70 *Bolbophorus confusus* Infections in Channel Catfish in Northwestern Mississippi and Effects of Water Temperature on Emergence of Cercariae from Infected Snails
J. S. Terhune, D. J. Wise, and L. H. Khoo

75 Tolerance of Incubating Walleye Eggs to Temperature Fluctuation
J. C. Schneider, J. Copeland, and M. Wolgamood

79 Analysis of Skin Color Development in Live Goldfish Using a Color Machine Vision System
G. K. Wallat, D. A. Luzuriaga, M. O. Balaban, and F. A. Chapman

Technical Notes

85 Use of a Sodium Chloride Refuge to Improve Survival of Larval *Morone* Species during Transfer to Rearing Ponds
A. C. Mauldin II, T. Barrett, and J. M. Grizzle

90 A Venturi Device for Rapid and Sanitary Removal of Waste from Aquaria
J. S. Gregory

92 **Guide for Authors**

VOLUME 64, NUMBER 2, APRIL 2002

95 Preliminary Observations on the Effects of Water Hardness on Free Taurine and Other Amino Acids in Plasma and Muscle of Channel Catfish
J. A. Buentello and D. M. Gatlin III

103 Production and Economic Analysis of Two-Phase and Three-Phase Culture of Sunshine Bass in Earthen Ponds
L. R. D'Abramo, C. L. Ohs, T. R. Hanson, and J. B. Taylor

Communications

113 Upwelling Flow Velocity Preferences of Captive Adult San Marcos Salamanders
J. N. Fries

117 Heritability of Swimbladder Inflation in Striped Bass
R. M. Harrell, W. Van Heukelem, J. M. Jacobs, J. R. Schutz, J. U. Takacs, and D. Jacobs

122 Biological Control of the Parasitic Copepod *Salmincola californiensis* in a Commercial Trout Hatchery on the Lower Merced River, California
J. C. Modin and T. M. Veek

129 Survival of Rainbow Trout Sac Fry Subjected to Various Formalin and Hand-Picking Regimes during Rearing in Vertical-Flow Tray Incubators
M. E. Barnes, W. A. Sayler, and R. J. Cordes

136 A Small-Scale Quarantine Facility for Existing Fish Hatcheries
R. A. Maes and G. J. Carmichael

144 Hatching Success and Fingerling Growth of Channel Catfish Cultured in Ozonated Hatchery Water
B. L. Brazil and W. R. Wolters

150 Comparative Effects of Half-Length Coded Wire Tagging and Ventral Fin Removal on Survival and Size of Pink Salmon Fry
A. C. Wertheimer, J. F. Thedinga, R. A. Heintz, R. F. Bradshaw, and A. G. Celewycz

Technical Notes

158 Comparison of a Direct Transesterification Method and the Bligh and Dyer Method to Determine Fatty Acid Content in Striped Bass Tissues and Diet
L. A. Dickey, B. B. Teter, J. Sampugna, and L. C. Woods III

164 A Simple Self-Contained Incubator for Cichlid Eggs
G. B. Brooks, Jr.

VOLUME 64, NUMBER 3, JULY 2002

167 Hatchery Evaluation of Erythromycin Phosphate Injections in Prespawning Spring Chinook Salmon
A. H. Haukenes and C. M. Moffitt

175 Evaluation of Protein Reduction and Lysine Supplementation of Production Diets for Channel Catfish
T. G. Gaylord, W. M. Sealey, and D. M. Gatlin III

182 A Copper Sulfate–Citric Acid Pond Shoreline Treatment to Control the Rams-Horn Snail *Planorbella trivolvis*
A. J. Mitchell

Communications

188 Hatchery Performance Attributes of Nipigon, Assinica, and Iron River Strains of Age-0 Brook Trout
T. M. Sutton, K. L. Pangle, and R. W. Greil

Technical Notes

195 Predicting Whole-Fish Nitrogen Content from Fish Wet Weight Using Regression Analysis
L. J. Ramseyer

205 Intensive Production of Smallmouth Bass Fry
R. Sparrow and A. Barkoh

210 Laboratory Evaluation of the Relative Effectiveness of Plant and Animal Source Oils for Control of Notonectidae in Fish Ponds
L. A. Bright, S. Coyle, A. VanArnum, and J. Tidwell

212 Investigations in Concurrent Disinfection and De-adhesion of Lake Sturgeon Eggs
H. J. Bouchard III and D. B. Aloisi

217 The Effect of Suspended Clay on Protein Removal during Foam Fractionation
M. Landau, C. Richard, and K. Erstfeld

220 Field Testing of Protocols to Prevent the Spread of Zebra Mussels *Dreissena polymorpha* during Fish Hatchery and Aquaculture Activities
W. J. Edwards, L. Babcock-Jackson, and D. A. Culver

224 Initial Sexual Maturity and Fecundity of Two Anabantids under Laboratory Conditions
H. Reyes-Bustamante and A. A. Ortega-Salas

228 A Variable-Speed Swim Tunnel for Testing the Swimming Ability of Age-0 Fish
D. L. Ward, O. E. Maughan, and S. A. Bonar

VOLUME 64, NUMBER 4, OCTOBER 2002

233 Differences in Incubation Period and Survival of Embryos among Brook Trout Strains
H. B. Baird, C. C. Krueger, and D. C. Josephson

242 Effect of Diets and Water Temperatures on Growth Performance of Splittail Larvae
D. F. Deng, S. J. Teh, F. C. Teh, and S. S. O. Hung

248 An Evaluation of Extenders for the Short-Term Storage of Striped Bass Milt
K. Jenkins-Keeran and L. C. Woods III

257 Water Quality and Macroinvertebrate Community Structure Associated with a Sportfish Hatchery Outfall
L. T. Fries and D. E. Bowles

267 Differences in Survival and Physiology between Coho Salmon Reared in Seminatural and Conventional Ponds
H. Fuss and J. Byrne

Communications

278 Effect of Fasting on Pituitary Growth Hormone Expression and Circulating Growth Hormone Levels in Striped Bass
B. C. Small, J. H. Soares, Jr., L. C. Woods III, and G. E. Dahl

284 Nitrogen Fertilization of Golden Shiner Ponds
Y. Tepe and C. E. Boyd

290 Menhaden Meal in Practical Diets for Channel Catfish Fry and Fingerlings Reared in Intensive Systems
A. M. Kelly, C. C. Kohler, C. E. Ayala, and D. M. Hughes

294 Use of Shrimp *Penaeus* spp. to Replace Krill *Euphausia* spp. in a Feed Training Diet for Largemouth Bass
L. T. Campbell and R. P. Phelps

Technical Notes

297 The Effects of Stocking Density on Survival, Growth, Condition, and Feed Efficiency of Bluegill Juveniles
D. Anderson, I. P. Saoud, and D. A. Davis

301 Effects of Surface Water Acclimatization on Postrelease Survival of Yearling Spring Chinook Salmon
A. E. Appleby, J. M. Tipping, and G. E. Vander Haegen

305 **Referee Acknowledgments**

306 **Author Index to Volume 64**

i **Table of Contents, Volume 64**